

## **Molecular Approach in Avian Sexing using Cheek Cells**

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### **Abstract**

This study was carried out to determine the sex of birds through the DNA extracted from cheek cells using polymerase chain reaction (PCR) technique. Sterile swabs were used to collect cheek cells from 39 adults of various psittacine species as a source of DNA. A pair of Eclectus parrots (*Eclectus roratus*), a sexual dimorphism species was used as a control group. Various quantities of DNA were extracted from the buccal samples by the conventional DNA extraction method. A set of primers, P2 and P8, was designed for the study. The positive control samples were tested with the primers that will bind to CHD W and CHD Z genes, in the chromosome Z and W of the birds. The PCR products of P2 and P8 showed a single band (300 bps) for male and double bands (300 bps and 400 bps) for female birds. Based on the PCR results, of the 39 samples tested, there were 15 males (39%), 12 females (31%) and 12 unknown (12%) sex. This study shows that avian cheek cells contain DNA and can be used as a tool for sex or gender determination for avian species.

**Keywords:** avian, birds, DNA extraction, PCR